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ABSTRACT

Using primary documents, maps, and visual data, this lesson packet focuses on the founders of Ontario, California, and the Frankish Building that is on the Historic Register of Historic Places. The lesson could be used with U.S. history units on the Progressive Era, with course units dealing with a variety of civic issues, or units involving the study of architecture. The unit outlines objectives for students and gives a list of materials students need for the lesson. The packet includes background materials, maps, readings, visual images, student activities, and a list of supplementary resources. (MM)

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Teaching with Historic Places

The Frankish Building: A Reflection of the Success of Ontario, California

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May 1999

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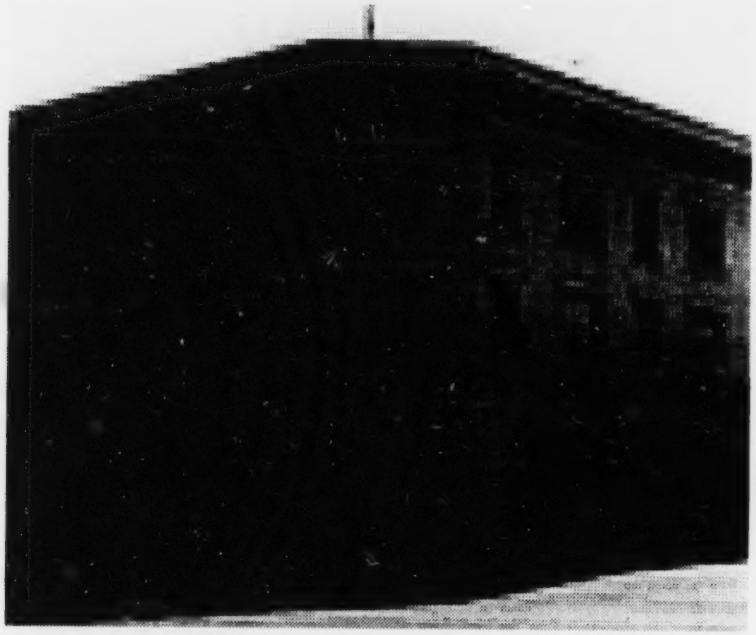
The Frankish Building: A Reflection of the Success of Ontario, California



Standing proudly on the southwest corner of Euclid Avenue and Transit Street in Ontario, California, the three-story Frankish Building symbolizes the commercial and economic success of a California town. Like hundreds of similar buildings across the nation — in small towns and large — the building is locally significant because of its association with a prominent man of the community and because of its attractive architectural style. The unusually wide and sweeping main street — Euclid Avenue — was the creation of the town's original founder, George Chaffey. Together, the building and its setting provide a visual reminder of the spirit of boosterism that swept across the nation in the late 19th century and the first decades of the 20th century.

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About This Lesson

This lesson about the founders of Ontario and the Frankish Building is based on the National Register of Historic Places registration file "Frankish Building," local newspaper files, and other local sources. It was written by Brent Heath, Social Studies Chair and Specialist at De Anza Middle School in Ontario, California.

Where it fits into the curriculum

Topics: The lesson can be used in units on the Progressive Era in U.S. history courses, in the examination of a variety of civic issues, and in the study of architecture. Students will practice their skills of observation, analysis, and group participation.

Time period: 1880s-1910s

Objectives for students

1) To evaluate the impact of the Chaffey brothers and Charles Frankish on Ontario, California, and compare their efforts with those of similarly important figures in their own community's history.

2) To understand the importance of irrigation in the settlement of Ontario, California.

3) To examine how particular buildings can be considered symbols of civic and individual pride.

4) To analyze the architectural merits of the Frankish Building.

5) To complete a Historic Resources Inventory of an important building in their own community.

Materials for students

The materials listed below either can be used directly on the computer or can be printed out, photocopied, and distributed to students. The maps, photos, and drawings appear twice: in a low-resolution version with associated questions and alone in a larger, high-resolution version.

1) maps of Ontario and California;

2) readings about the efforts of three men to guide the growth of Ontario;

3) a photo of Euclid Avenue;

4) a drawing of architectural details;

5) photos of the Frankish Building.

Visiting the site

Ontario can be reached from east or west by Interstate Highway 10 or California Highways 66 or 60, the Pomona Freeway, or by flying in to the Ontario International Airport. The Frankish Building is located at the corner of Euclid Avenue and Transit Street.

Teaching Activities

Setting the Stage

Explain to students that the 1870s and 1880s brought extensive efforts to develop agriculture on the dry lands of the West. Many people, including the editor of the influential New York Tribune, Horace Greeley, believed that the West's barren acres could be profitably farmed if they could be well irrigated. Developing irrigation systems took money, however, and most families who wanted to move West had little hard cash. Greeley came up with a plan that would enable such people to start a settlement — a model colony—by purchasing jointly-held land and using their skills to make irrigated land profitable. Greeley personally backed such a planned community in Greeley, Colorado, which caught the attention of other organized groups of settlers and of entrepreneurs throughout the West. Through such efforts, many other colonies similar to Greeley were organized during the 1870s and 1880s. Most such towns failed, however, because the settlers had underestimated the large amounts of water needed for irrigating the arid West. Of the successful towns, some faltered, but after many struggles—including the return of the land to individual ownership — eventually became bustling towns like the one Greeley established.

In the San Gabriel/Pomona Valleys of California, one of the best known and most successful colonies owed its beginning to George Chaffey and his younger brother William. Canadian immigrants, they had arrived in nearby Riverside in 1880. Two years later, George Chaffey bought 6,218 acres of land and began to lay out a model colony, which he named Ontario after his native province in Canada. Chaffey struck a subterranean flow in San Antonio Canyon, laid 40 miles of pipe, and formed California's first mutual water company in Ontario. Not only did Chaffey make farming possible in the region, but he also put his vision of a model colony into operation. Much of Ontario's subsequent growth was due to Charles Frankish, a businessman who played a variety of roles including constructing the Frankish Building, an important commercial and residential building. With the good start Chaffey provided, coupled with the later efforts of Charles Frankish, Ontario, California, became a special place in which to live.

Teaching Activities--Locating the Site

Map 1: State of California.

1. Ontario, California, once the home of Serrano and Gabrieleno Indians (Tungva nation) is bordered on the north by the San Gabriel Mountains and on the south, west, and the east by desert. After you locate Ontario, use small triangles to draw in the San Gabriel Mountains and label the mountains.

2. Spanish explorers in the 18th century and American explorers in the 19th century visited the site that later became Ontario, California. It was not until 1872, when the Southern Pacific Railroad passed through the area, that people began to consider settling there. Why do you think this was so?

Teaching Activities--Locating the Site

Map 2: Plan of Ontario, California, c. 1883.

(Courtesy of Ontario City Library.)

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1. Euclid Avenue, Ontario's main street, was named for a great Greek mathematician. Do you know if there are streets in your community named for great people of the past? If not, how could you find out? What patterns do you notice when examining other street names in Ontario?

2. Locate and mark on the map the intersection of Euclid Avenue and A Street (now known as Holt Boulevard), which formed the center of the town. What do the proximity of the railroad station grounds and depot suggest about the role the railroad played in the city's life?

3. Locate and mark on the map the southwest corner of the intersection of Euclid Avenue and Transit Street, where the Frankish Building was constructed in 1915. (Note that Transit Street was actually built through to Euclid Avenue, instead of ending at Laurel Avenue as the map depicts.) What does its location suggest about the commercial importance of the building?

Teaching Activities--Determining the Facts

Reading 1: The Beginnings of a City

The Chaffey Brothers

Ontario was a planned community with innovations that show merit even today. Even before breaking ground for the first roads and first buildings in 1882, George Chaffey and his younger brother William had envisioned a "Model Colony." They developed four basic principles for their colony: (1) cement pipes would distribute water throughout the entire tract to each farm lot, with each holder of water rights to share in the water proportionately to his holdings, regardless of the distance from the source; (2) a grand thoroughfare, landscaped to be a thing of beauty forever, would run from one end of the settlement to the other; (3) an agricultural college would provide for general education; and (4) deeds would include a clause absolutely forbidding the sale of intoxicating liquor, in order to draw the best possible type of settlers.

Providing water to the colony's lots was a prerequisite for starting a new community. The Chaffey brothers had already successfully created irrigated land developments, and they used that experience to figure out a way to provide sufficient water to the colonists of Ontario. The newly purchased lands carried the water rights of the San Antonio Canyon to the north, but that surface water could not support a large population. To complicate the water problem, the city of Pomona claimed half of the surface flow in the canyon. The Chaffeys solved their problem by driving a 2,850-foot tunnel into the canyon bed. There they struck a strong subterranean flow of water which they conducted through a cement-lined ditch to join the diverted surface flow.

With water now available, the Chaffeys laid 40 miles of pipe, formed the San Antonio Water Company, and delivered water to each lot in the colony. The layout of the water lines also determined the form of downtown Ontario. Euclid Avenue divided the water distribution in half. The brothers then made the water company the joint property of all the people who owned lots in the colony. The company soon added wells and sold water to subsidiary companies at ample pressure for both domestic use and irrigation. Water was available at the highest point of each 10-acre lot every 30 days during irrigation season. The company provided a printed schedule that showed when water would be delivered to each parcel of land. The water from San Antonio Canyon also was used to generate electricity for operating pumps and to provide light and power. George Chaffey set aside 640 acres to be used for the general community, half of which was deeded to the Chaffey Agricultural College. While the college would focus on training young men of the region to be effective farmers and ranchers, it would also provide a general college education.

In 1886 the Chaffey brothers departed for Australia where they hoped to construct planned communities similar to Ontario. The Ontario Land and Improvement Company was formed to buy the brothers' Ontario interests. Most of the investors lived in Los Angeles, but the general

manager, Charles Frankish, had moved to Ontario, and a new era in the growth and development of the city began.

Charles Frankish

Charles Frankish moved to Ontario in 1885, after trading his 10-acre citrus ranch in nearby Riverside for 80 acres of undeveloped land on Euclid Avenue, south of the Southern Pacific railroad tracks (not shown on Map 2). He moved to Ontario because he firmly believed in what the Chaffey brothers were attempting to accomplish with their planned "Model Colony," and also because he foresaw Ontario's potential for growth and development. When he learned that the Chaffey brothers were planning to sell their interest in the model community, he quickly joined with a small group of investors to organize the Ontario Land and Improvement Company. In February 1886 Frankish was named president and manager of the newly formed company. He took an active role in the promotion and sale of the company's land holdings. Under his management, the company sold $1,015,000 of real estate during its first two years of existence.

Frankish was actively involved in the planning and development of Ontario. He was responsible for the design of almost all of the city south of the Southern Pacific tracks. He personally supervised the extension of Euclid Avenue to Ely Street (now Philadelphia), the city's southern limit, and the installation of stone gutters along the avenue to handle flood waters, doing much of the actual gutter construction himself. In 1887 Frankish guided the organization of the Ontario and San Antonio Heights Railroad (a trolley system).

Frankish also helped establish Ontario's first bank, the Ontario State Bank, in 1887 and served variously as its secretary, vice president, president, and director. In 1895 the town installed its system of electric lights under Frankish, who managed the system until 1901. He formed and headed his own corporation, the Frankish Company, which bought out the Land and Improvement Company in 1912. In a 1907 advertising campaign, the Frankish Company used the slogan "The City That Charms." Later this phrase was adopted by the city of Ontario as its official slogan. Like other important men in the town, Frankish built a family home on Emporia Avenue, and in 1915-16 he and his son Hugh designed and built one of the city's landmark commercial and residential buildings on Euclid Avenue.

The Contributions of the Town Fathers

Both the Chaffey brothers and Charles Frankish left their mark on the town of Ontario. The Chaffey brothers were responsible both for planning the distinctive wide central boulevard around which the town would grow and for instituting its overall grid plan. Seven miles long and 200 feet wide with twin roadways and a central mall, Euclid Avenue always has been the center of everyday and special activities of Ontario. Frankish took over at a time when the original settlement was maturing and needed guidance to compete successfully with other communities in the surrounding region. Like many businessmen of his time period, Frankish celebrated his influence in the community by erecting a special building bearing his name. It stands as a fitting remembrance of a man who took his duties as a town father seriously.

Ontario's rapid growth under its founding fathers and its various awards and honors demonstrate the quality of its planning. In 1903 the State Department of Agriculture chose Ontario as the Model Irrigation Colony. The St. Louis World's Fair also honored the town in 1904. Its orderly growth in subsequent years came from the clear-sighted planning of the Chaffey brothers and Charles Frankish.

1. What do the Chaffeys' basic principles for the colony tell you about their vision for Ontario? We know the first three were adhered to. How could we find out if the fourth principle was implemented?

2. How did the Chaffeys put their plan for a water and irrigation system into effect?

3. In what ways do you think Euclid Avenue and the agricultural college drew settlers? If you had been alive in the 1880s, do you think that you might have considered moving to Ontario? Why or why not?

4. How did Charles Frankish become involved in the development of Ontario? In what ways did he promote the community? Why could he be considered a town "father"?

Reading 1 was compiled and adapted from Ontario Historic Landmarks Society, The Colony Tour: An Experience of Ontario's Heritage (Ontario, Calif.: ADS, 1991); and from Vickie K. Alexander, "Frankish Building" (San Bernardino County, California) National Register of Historic Places Registration Form, Washington, D.C.: U.S. Department of the Interior, National Park Service, 1979.

Teaching Activities--Determining the Facts

Reading 2: The Frankish Building — A Symbol of Wealth and Position

The Frankish Building was highly praised when it was built in 1915 by Charles Frankish. It incorporated characteristics of a popular architectural style known as Second Renaissance Revival. That means that the building has some features that were inspired by the Italian Renaissance, including: (1) a facade that is more or less flat with no pronounced projections or recessions; (2) rusticated quoins, or rough-hewn stones that form the angles of the corners of the building; (3) lintels, or horizontal beams that support the area above the windows, which project and are made of smooth stone; (4) plain wooden cornices, or horizontal molded projections at the top of the building on the street sides; and (5) decorative brackets at each corner of the cornice. The corner of the building facing the street was cut off at a 45 degree diagonal, forming an impressively-wide frame for the first floor entry.

The building was constructed of reinforced concrete, precast concrete blocks called art stone, cement plaster, and glazed white brick. Large plate glass windows separated by columns embellished the first floor, which also had a court recess in the rear of the building. This floor was used for commerce, housing various offices through the years. The Charlemagne Apartments located on the second and third stories excited the curiosity of the whole town. Apartments as living places were a fairly new and very urban phenomenon in 1915. The Frankish Building housed 32 units, 16 on each floor, consisting of two to four rooms each. The entrance lobby to the apartments was located at the midpoint on the Transit Street side of the building.

While the decorative design of the building was fairly plain, it was entirely suitable for a structure that served both as a business building and as a residence. Following are excerpts from a 1915 article on Charles Frankish in the Ontario Daily Report:

> One of the latest undertakings of the Frankish Company for the promotion of the city's best interests is the erection of the handsome stone, brick and reinforced concrete business block at the southwest corner of Euclid Avenue and Commercial Court [Transit Street] known as the Frankish Building.
>
> The ground floor of this building...will be devoted probably entirely to mercantile or financial establishments, while the second and third floors are being fitted for very high-class and modern living apartments and offices. The central location of this building, together with the beautiful views it commands of the mountains and of City Hall Park, make it particularly desirable for a high-grade apartment house.
>
> Practically the entire work of construction of this handsome building has been under the

direct supervision of Mr. Frankish or of his son, Hugh H. Frankish. Nothing but the best of materials have been used and all workmanship has been of the highest quality so that this three-story edifice is quite substantial as it is handsome.

It is the most handsome and substantial business block in the city and it is doubtful if it would be possible to erect one more simply ornate and beautiful....Indeed the exquisite art stone, of which it is largely built was made from their own formula, right on the ground, and might almost be said to be an 'epoch' in the art of stone making....

1. What design components of the Frankish Building identify it as Second Renaissance Revival?

2. What construction materials were used in the Frankish Building?

3. Why do you think the townspeople of Ontario were excited about the building of the Charlemagne Apartments?

4. How does the article from the Ontario Daily Report indicate approval of the new building?

Reading 2 was compiled from Ontario Historic Landmarks Society, The Colony Tour: An Experience of Ontario's Heritage (Ontario, Calif.: ADS, 1991); and Vickie K. Alexander, "Frankish Building" (San Bernardino County, California) National Register of Historic Places Registration Form, Washington, D.C.: U.S. Department of the Interior, National Park Service, 1979.

Teaching Activities--Visual Evidence

Photo 1: Euclid Avenue, May 1888.

(Courtesy of Ontario City Library.)

1. Examine Photo 1 and try to match its location to Map 2.

2. List details that are evident in the photo but are not shown on Map 2. How do these details contribute to your understanding or impressions of Ontario in its early years of development?

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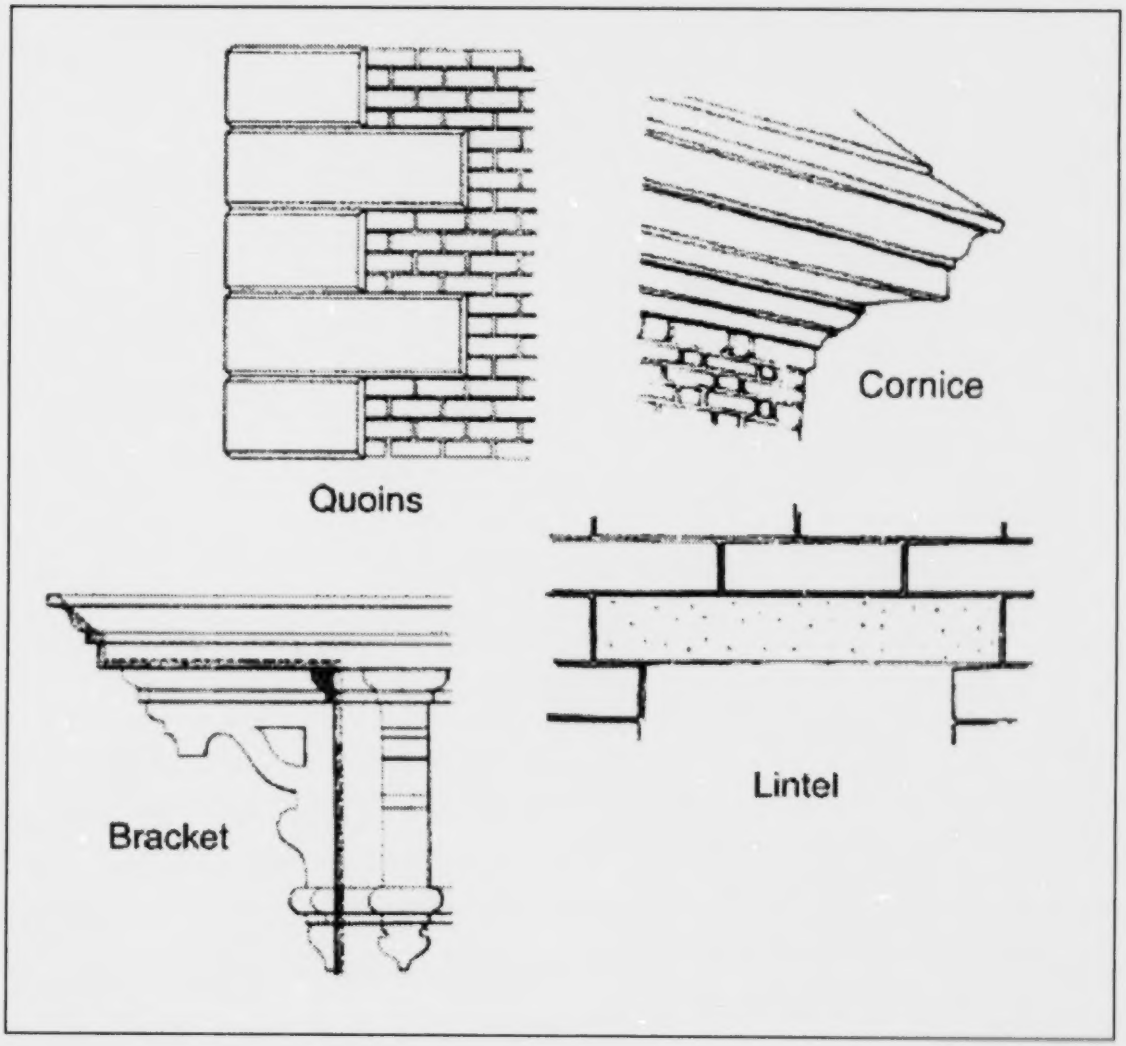
Teaching Activities--Visual Evidence

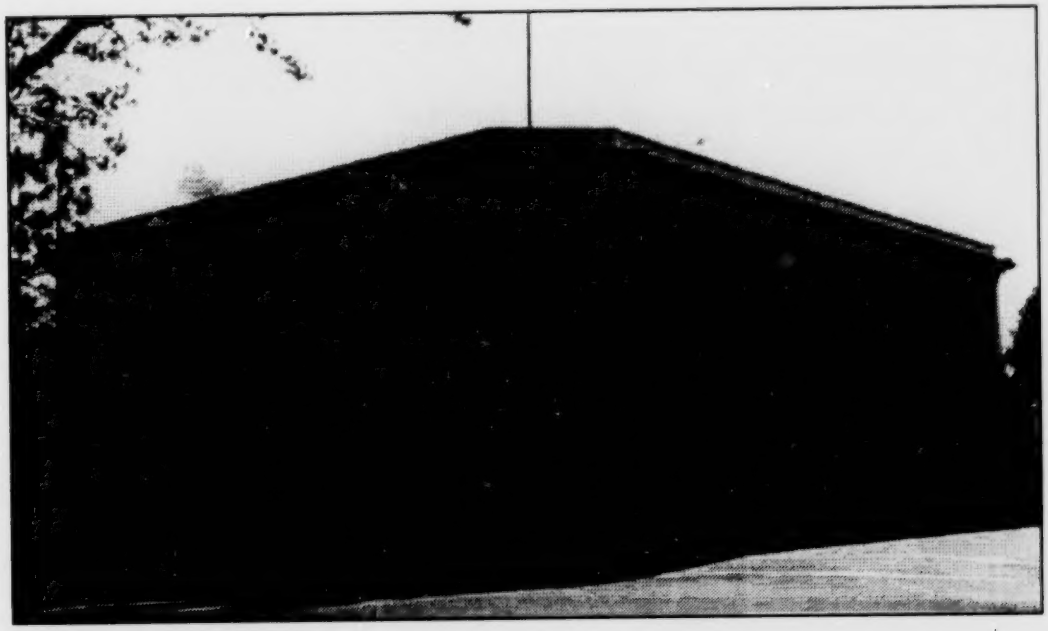
Drawing 1: Architectural details similar to those found on the Frankish Building.



1. Refer to the sketches of the architectural elements above and descriptions in Reading 2 to make a drawing of what you think the facade of the Frankish Building looks like.

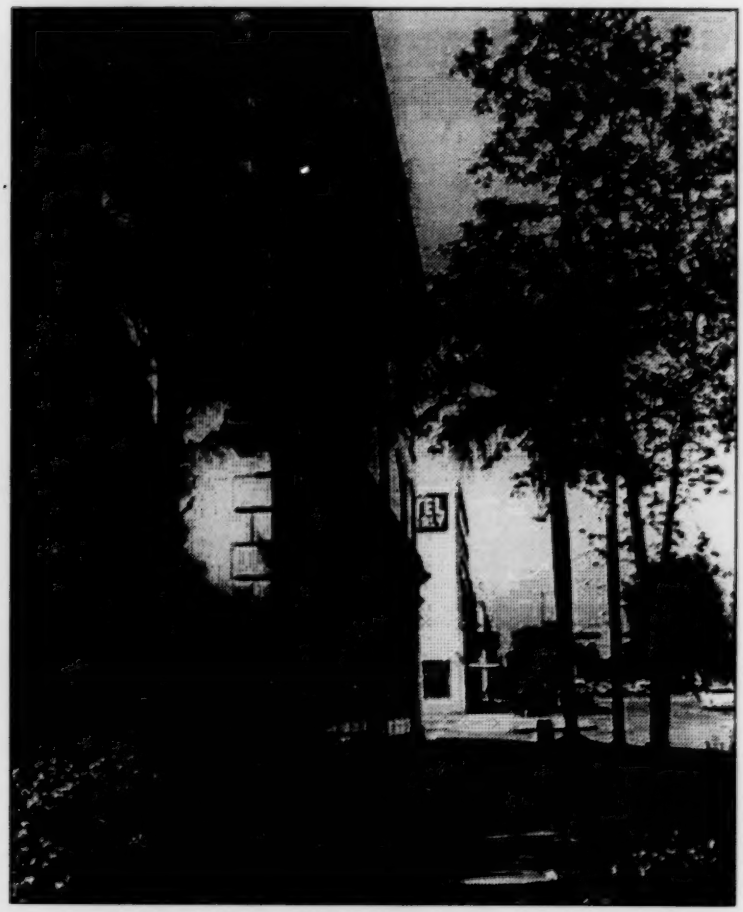
Teaching Activities--Visual Evidence

Photo 2a: Frankish Building.



(Photo by Brent Heath.)

Photo 2b: Frankish Building.



(Photo by Brent Heath.)

The Frankish Building and others built in small towns across America at the turn of the 20th century were, in effect, a celebration both of what people of the time considered progress, and of man's ability to shape his surroundings.

1. How does your sketch of the Frankish Building differ from the images above? Were you able to visualize the building as it exists or did the written descriptions lead you to expect a more imposing and fancier building?

2. Identify the rusticated quoins, lintels, cornice, and brackets of the Frankish Building.

3. What are your impressions of the Frankish Building?

Putting It All Together

Students have been introduced to the basic history of Ontario and the significance of the Frankish Building. The Frankish Building still stands as testimony to the ability of a town-founder whose efforts to boost his own community were highly successful. Through the following activities students will explore some of the historical, architectural, and commercial aspects of their own community, as well as Ontario.

Activity 1: Advertising the Colony of Ontario

Have students review Reading 1 and work in groups to make a list of ways they would have tried to attract people to the "Model Colony" of Ontario. Have them consider the vision of the Chaffey brothers and the reality of what Frankish called "The City That Charms." Then ask each group to design and make an advertising poster touting the positive attributes of Ontario to prospective settlers. Each poster should address these three questions:

1. What might be the commercial potential of Ontario? (Consider the market for crops that could be grown on irrigated land in a warm climate.)

2. How is Ontario designed and planned to attract prospective citizens?

3. Why should people move here?

Have the groups share their posters with the class. You may wish to post these on a bulletin board or use them for a hallway display.

Activity 2: Looking at a Building

The people of Ontario can look down the center parkway of the broad expanse of Euclid Avenue, view the design of the Frankish Building, or turn on the water in their sinks and be reminded of the enormous contributions the Chaffey brothers and Charles Frankish made to their community. Have students research of the founders of their own community and present their findings in a short report. Then have the students find out whether or not any buildings remain that were built by, or are related in some way, to a town founder. If so, have them compare the design components of one of these buildings with those found on the Frankish Building.

Next, take students on a walking field study of an area that is now, or once was, the center of town, or ask them to make such a trip on their own time. Ask students to choose a building and sketch as many sides a possible. Then have them label as many design components as they can. If possible, have architectural history books available so that when students return to the classroom, they can complete the labeling. Next, have students compare their sketches with one another, and review the architectural terms learned. Some students may wish to design and make a model of the building they sketched. The model could be a diorama, salt flour/clay design, or cardboard reproduction. If possible, invite another class in to view the models, and have each student

describe his or her work for the visitors.

Activity 3: Determining Community Sites of Historic Significance

Explain that the Frankish Building is listed in the National Register of Historic Places, a program administered by the National Park Service. The register is the official list of properties recognized as significant in American history, architecture, archeology, engineering, and culture, and worthy of preservation. The Frankish Building is considered significant because of its architecture and its association with Charles Frankish. Nearly every community has at least one building that carries equal significance. Have your class consider what sites in their region might meet the criteria for listing in the National Register of Historic Places outlined below.

As students discuss buildings in their community, help them to understand that places listed in the National Register of Historic Places must be carefully documented and must have significance in one of the following areas: (1) they are associated with events that have made a significant contribution to the broad patterns of our history; (2) they are associated with the lives of persons significant in our past; (3) they embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or (4) they have yielded, or may be expected to yield, information important in history or prehistory.

Explain that interested people in local communities generally prepare a Historic Resources Inventory for a large number of sites that meet one of the listed criteria. They then choose from those inventories the sites that require additional study and documentation before they can be considered for registration on the local, state, or national levels. Your students might help with the initial survey by preparing one or more inventories. Provide students with copies of the Historic Resources Inventory. Review the form carefully with the students, explaining what information must be included to complete the form. Then have students practice using a Historic Resources Inventory by preparing a form for their own home or for a commercial building in their community. Have the class compare what they have learned by completing the form. Then have the class choose one local property that they believe may be eligible for listing in the National Register of Historic Places. Have them check with the State Historic Preservation Officer to determine whether it is already listed. If it is not, have students research the background of the property and write a report, do an oral presentation, and, possibly develop the documentation necessary for nominating this property for the National Register.

Preparing a National Register of Historic Places nomination is an ambitious project and you will want to talk with the State Historic Preservation Officer before you begin. You will probably find a number of local people from different agencies who would be happy to help the class. You will also want to refer to appropriate publications such as National Register Bulletin 15, "How to Apply the National Register Criteria for Evaluation." Visit the National Register Publications web page for information on other helpful Bulletins. http://www.cr.nps.gov/nr/nrpubs.html

HISTORIC RESOURCES INVENTORY

1. Historic Name (s)

Original Owner

2. Present Name

3. Owner's Name

4. Owner's Address

5. Location

6. Open to Public
Yes No

7. Visible from road
Yes No

8. Ownership
Private ____
Local ____
State ____
Federal ____

9. Local Contact/Organization

10. Site Plan with North Arrow

11. Architect

12. Builder

13. Date

14. Style

15. Original Use

16. Present Use

17. Condition
Interior
Exterior

18. Description

19. History

20. Significance

21. Source of Information

The Frankish Building -- Supplementary Resources

The Frankish Building: A Reflection of the Success of Ontario, California relates how a local landmark represented the prosperity of one developing city. Below are additional resources for topics discussed in this lesson.

Ontario Chamber of Commerce http://www.ontario.org/

The Ontario Chamber of Commerce provides a modern-day glimpse of this California city, including tourist information and a look at the buildings which symbolize its current success.

City of Ontario http://www.ci.ontario.ca.us/

The City of Ontario includes information on Ontario's government, GIS maps, additional links, and a searchable database.

Society of Architectural Historians http://www.ccsf.caltech.edu/~mac/sah/index.htm

The Society of Architectural Historians website offers related links concerning the architecture of Southern California.

Josyln Art Museum http://www.joslyn.org/

The Joslyn Art Museum website contains a useful glossary of architectural terms as well as additional resources for educators.

The National Trust For Historic Preservation http://www.nthp.org/

The National Trust For Historic Preservation offers related architectural links and maintains the Main Street Center, a program committed to the downtown revitalization of cities across the country.

http://www.nthp.org/main/frontline/internet/architecture.htm
http://www.mainst.org/

GLOSSARY OF ARCHITECTURAL TERMS

Adapted from the Penguin Dictionary of Architecture by John Fleming, Hugh Honour, and Nikolaus Pevsner with drawings by David Etherton, Fourth Edition, 1991.

ABACUS: the flat slab on the top of a capital: in the Doric order, a thick square slab; in Ionic, a square slab with the lower edge molded, in Corinthian, a square with concave sides and the corners cut off; in Egyptian architecture, a square cube.

ACROTERIA: statues or ornaments placed at the apex and ends of a pediment.

ARCH: the spanning of an opening by means other than that of a lintel (horizontal beam). True arches are curved and constructed with wedge-shaped blocks (voussoirs) and a keystone at the top. A lancet arch is pointed. An ogee arch is pointed with S-shaped sides.

ARCHITRAVE: the lintel extending from one column or pier to another, the lowest part of the entablature.

ATTIC STORY: a story above the main entablature of a building or triumphal arch.

BASILICA: an ancient Roman colonnade hall for public use, the form of which was later adopted as a building type for Early Christian churches. Basilicas are oblong buildings with aisles and galleries with in apse opposite the entrance.

BUTTRESS: a mass of masonry or brickwork projecting from or built against a wall to give additional strength, usually to counteract the lateral thrust of an arch, roof, or vault.

COLONNADE: a row of columns carrying an entablature or arches.

COLUMN: a free-standing, upright member of a circular section, usually intended as a support.

CORINTHIAN ORDER: an order invented in Athens, Greece in the fifth

century B.C. ad later developed by the Romans. The capital is characterized by a proliferation of acanthus leaves.

CORNICE: the projecting section of an entablature, any projecting ornamental molding along the top of a building, wall, or arch, finishing or crowning it. That along the sloping sides of a pediment is called a raking cornice.

DENTIL: a small square shape often repeated in a horizontal line as ornamental in classical architecture.

DOME: a vault of even curvature on a circular base. The section can be segmental, semicircular, pointed, or bulbous.

DORIC ORDER: the earliest of the Greek orders also adapted by the Roman, featuring a frieze of triglyphs and metopes. Greek Doric columns have no base; Roman Doric columns have bases.

DORMER WINDOW: a window placed vertically in a sloping roof and with a roof of its own. It usually serves as sleeping quarters, hence the name.

DRUM: a vertical wall supporting a dome, it may be circular, square, or polygonal in plan. Also, the cylindrical blocks that make up a column.

EAVES: the underpart of an overhanging cornice or sloping roof.

ENGAGED COLUMN: a column attached to, or partly sunk into, a wall or pier.

ENTABLATURE: the upper part of an order, consisting of architrave, frieze, and cornice.

EYE: the center of a volute.

FA&CcedilADE: the front or face of a building, emphasized architecturally.

FINIAL: a formal ornament at the top of a canopy, gable, or pinnacle.

FLUTING: shallow, concave grooves running vertically on the shaft of a column, pilaster, or other surface.

FRIEZE: the middle division of an entablature, between the architrave and the cornice, usually decorated but may be plain.

GABLE: the triangular upper portion of a wall at the end of a pitched roof corresponding to a pediment in classical architecture. It can also be used non-functionally, over a doorway for example.

HOGYO ROOF: a square, pyramidal roof with curved eaves common in Japanese architecture.

HYPOSTYLE: a hall or other large space over which the roof is supported by rows of columns like a forest.

IONIC ORDER: an order that originated in Asia Minor in the mid-sixth century B.C. and that was used commonly by the Greeks. The Ionic capital is characterized by scroll-like volutes.

JAMB: the vertical face of an archway, doorway, or window.

KEYSTONE: the central stone of a true arch or rib vault.

LANTERN: a small circular or polygonal turret with windows all round, downing a roof or dome.

LINTEL: horizontal beam or stone bridging an opening.

LOADBEARING CONSTRUCTION: construction in which walls, posts, columns, or arcades support the weight of the ceilings and upper floors.

METOPE (pronounced meh-toe-pee): the square between two triglyphs in the frieze of a Doric order, it may be carved or left plain.

MINARET: a tall, usually slender tower or turret connected with a mosque. From a balcony on the minaret the muezzin calls people to prayer.

MOSQUE: an Islamic religious building for communal prayer.

NICHE: a vertical recess in a wall or pier, usually arched and containing a statue or urn.

OBELISK: a tall, tapering shaft of stone, usually monolithic, of square or rectangular section and ending pyramidally; prominently used in ancient Egypt, from whence many were brought to Europe under the Roman

Empire.

OCULUS (pl. OCULI): a circular opening in a wall or at the apex of a dome.

ONION DOME: a pointed bulbous dome common in Russian, European, and Islamic architecture. Structurally it is not a true dome, as it is not vaulted.

PALAZZO (pl. PALAZZI): a fortress-like, three-storeyed home during the Italian Renaissance, usually featuring a rusticated stone exterior.

PALLADIAN WINDOW: a window with three openings, the central one and wider than the others; a hallmark of buildings designed by Andrea Palladio; " called a seralina.

PARAPET: a low wall placed to protect any spot where there is a sudden drop, for example at the end of a bridge, quay, or house-top.

PEDIMENT: in classical architecture , a low-pitched triangular gable a portico. A pediment can also be a similar feature above doors or windows.

PENDENTIVE: a concave spandrel leading from the angle of two walls to the base of a circular dome; the structural means of support for a circular dome to rest on a square drum, common in Byzantine architecture.

PIANO NOBILE: the main floor of a house, especially a palazzo, containing reception rooms. It is usually higher than the other floors, with the basement or ground floor below and one or more shallower storeys above.

PIER: a solid masonry support, as distinct from a column; the solid mass between doors, windows, and other openings in buildings.

PILASTER: a shallow pier or rectangular column projecting only slightly from a wall and, in classical architecture, conforming with one of the orders.

PORTAL: a door or entrance.

PORTICO: a roofed space, open or partly enclosed, forming the entrance of the fa&ccedilade of a temple, house, or church, often with detached or attached columns and a pediment.

POSTS: the main verticals of walls or doorways that support a lintel.

PROSCENIUM: in modern theaters, the space between the curtain and the orchestra, sometimes including the arch and frontispiece facing the auditorium.

PYLON: in ancient Egyptian architecture, the rectangular, truncated, pyramidal towers flanking the gateway of a temple.

PYRAMID: in ancient Egyptian architecture, a sepulchral monument in the form of a huge stone structure with a square base and sloping sides meeting at an apex.

QUOIN: the stones at the corners of buildings, usually laid so that their faces are alternately large and small. From the French coin (corner).

RELIEF SCULPTURE: sculpture that is partially attached to a base; varying degrees of relief range from almost in-the-round to barely raised above the surface.

ROTUNDA: a building or room circular in plan and usually domed.

ROUNDEL: a circular ornament, often decorated with sculptural reliefs or glazed terra-cotta.

RUSTICATION: masonry cut in massive blocks, sometimes in a crude state to give a rich and bold texture to an exterior wall.

SHAFT: the trunk of a column between the base and the capital.

SKYSCRAPER: a multi-storied building constructed on a steel skeleton, combining extraordinary height with ordinary rooms such as would be found in low buildings. The term originated in the United States in the late 1880s after buildings in New York ten stories.

SORI: the curved eaves line of a Japanese roof.

SPANDREL: the triangular space between the side of an arch, the horizontal above its apex, and the vertical of its springing; the surface between two arches in an arcade.

SPIRE: a tall, pyramidal, polygonal, or conical structure rising from a

tower, turret, or roof (usually of a church) and terminating in a point.

TERRA-COTTA: fired but unglazed clay, used mainly for wall or roof covering and ornamentation.

THATCH: a roof covering of straw, reeds, or other vegetable material, held in place by stones, ropes, or poles, or interspersed with layers of mud.

TRACERY: the ornamental work in the upper part of a window, screen, or panel, or used decoratively in blank arches and vaults.

TRIGLYPH: a block separating metopes in a Doric frieze; each has two vertical grooves (or glyphs) in the center and half grooves at the edges.

TURRET: a very small, slender tower.

TYMPANUM: the area between the lintel of a doorway and the arch above it.

VAULT: an arched ceiling or roof of stone, brick, or concrete.

VERANDA: an open gallery or balcony with a roof supported by light supports.

VILLA: in Roman architecture, the land-owner's residence or farmstead on his country estate; in Renaissance architecture, a country house; in 19th-century England, a detached house usually on the outskirts of town; in modern architecture, a small house.

VOLUTE: a spiral scroll on an Ionic capital.

VOUSSOIR: a brick or wedge-shaped stone forming one of the units of an arch.